

## CLAIMS

What is claimed is:

1. A nucleic acid comprising a promoter and a set of recombinase sites, comprising a first recombination site and a second recombination site, wherein the promoter and the set of recombinase sites are oriented so that transcription from a transcription start site is increased when a recombinase acts on the set of recombinase sites after the nucleic acid is attached to a second nucleic acid forming a third nucleic acid and wherein the third nucleic acid comprises a transcription start site.
2. The nucleic acid of claim 1, further comprising a decoy sequence in between the recombinase sites
3. The nucleic acid of claim 2, wherein the decoy sequence comprises a marker sequence.
4. The nucleic acid of claim 3, wherein the marker sequence confers antibiotic resistance
5. The nucleic acid of claim 3, wherein the marker sequence confers Neomycin Resistance, Zeocin Resistance, Blasticidin Resistance, or Hygromycin Resistance.
6. The nucleic acid of claim 3, wherein the marker sequence is a fluorescent protein.
7. The nucleic acid of claim 3, wherein the marker sequence is Beta-Galactosidase, or Green Fluorescent Protein. EGFP, ECFP, EYFP, HcRed or DsRed
8. The nucleic acid of claim 2, wherein the decoy comprises a transcription inhibitor recognition site.
9. The nucleic acid of claim 8, wherein the transcription inhibitor site is TTTTTT or SEQ ID NO:3.
10. The nucleic acid of claim 1, further comprising a transgene.
11. The nucleic acid of claim 10, wherein the transgene comprises a functional nucleic acid, a sequence encoding a protein, or a marker.
12. The nucleic acid of claim 10, wherein the transgene comprises a functional nucleic acid.
13. The nucleic acid of claim 12, wherein the functional nucleic acid comprises an

antisense molecule, a ribozymes, an external guide sequence, a triple helix forming nucleic acid, or an RNAi nucleic acid.

14. The nucleic acid of claim 1, wherein the promoter is an RNA polymerase III promoter.
15. The nucleic acid of claim 14, wherein the RNA polymerase III promoter comprises a sequence having at least 80% identity to a sequence set forth in SEQ ID NO: 2
16. The nucleic acid of claim 15, wherein the RNA polymerase III promoter comprises a sequence having the sequence set forth in SEQ ID NO:2.
17. The nucleic acid of claim 14, wherein the RNA polymerase III promoter comprises a type 1, type 2, or type 3 polymerase III promoter.
18. The nucleic acid of claim 15, wherein the RNA polymerase III promoter comprises a U6, 7SK, hY4, hY5 and H1.
19. The nucleic acid of claim 18, wherein the RNA polymerase III promoter comprises a sequence set forth in SEQ ID NO: 9-14
20. The nucleic acid of claim 1, wherein the recombinase sites are recognized by a lambda integrase.
21. The nucleic acid of claim 20, wherein the lambda integrase comprises phage lambda integrase, bacteriophage P1 Cre recombinase, a XerC/XerD recombinases, or Flp recombinase.
22. The nucleic acid of claim 1, wherein the recombinase sites are recognized by a resolvase-invertase.
23. The nucleic acid of claim 22, wherein the resolvase-invertase comprises a gamma-delta resolvase, TN3 transposon resolvase, Gin invertase, or a Hin invertase.
24. The nucleic acid of claim 1, wherein the promoter and the set of recombinase sites are oriented 5' to 3' promoter then first recombinase site then second recombinase site.
25. The nucleic acid of claim 1, further comprising a marker sequence or transgene.

26. A vector comprising the nucleic acid of claim 1.
27. A cell comprising the nucleic acid of claim 1.
28. An non-human organism comprising the nucleic acid of claim 1.
29. A non human mammal comprising the nucleic acid of claim 1.
30. A nucleic acid comprising a promoter and one member of recombinase set, wherein the promoter and the recombinase site are oriented so that when the nucleic acid is attached to a second nucleic acid comprising a transcription start site and a second member of the recombinase set transcription from the transcription start site is increased when a recombinase acts on the recombinase sets.
31. A nucleic acid comprising a promoter, a set of recombinase sites, and a transcription start site.
32. The nucleic acid of claim 1, wherein the nucleic acid is SEQ ID NO:3, SEQ ID NO:4, SEQ ID NO:5, SEQ ID NO:6, SEQ ID NO:7, or SEQ ID NO:8.
33. The nucleic acid of claim 1, wherein the promoter, the set of recombinase sites, and the transcription start site are oriented so that when the nucleic acid is attached to a second nucleic acid comprising a transcription start site, transcription from the transcription start site is increased when a recombinase acts on the set of recombinase sites.
34. A nucleic acid comprising a promoter and a set of recombinase sites, comprising a first recombination site and a second recombination site, wherein the promoter and the set of recombinase sites are oriented so that transcription from a transcription start site is repressed before a recombinase acts on the set of recombinase sites, after the nucleic acid is attached to a second nucleic acid forming a third nucleic acid and wherein the third nucleic acid comprises a transcription start site.